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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/853,276	05/11/2001	Randall D. Blanchard	LITD:0013	5871

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SNELL & WILMER LLP
1920 MAIN STREET
SUITE 1200
IRVINE, CA 92614-7230

EXAMINER	
RUDE, TIMOTHY L	

ART UNIT	PAPER NUMBER
2883	

DATE MAILED: 01/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/853,276	BLANCHARD, RANDALL D.	
	Examin r	Art Unit	
	Timothy L Rud	2883	

-- Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 October 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10,12-15 and 58-60* is/are pending in the application.

4a) Of the above claim(s) *4,8,9 and 58-60* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,5-7,10 and 12-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claims

Claims 1, 12, and 15 are amended. Claim 11 is canceled. Claims 58-60 are added.

Election/Restrictions

Newly submitted claims 58-60 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:

As to claim 58, a back-lighted display was not originally presented and is therefore considered drawn to a non-elected species.

As to claim 59, a textured surface glass transparent panel was not originally presented and is therefore considered drawn to a non-elected species.

As to claim 60, the method step recitations are considered to comprise a method of making that was restricted previously and is therefore considered drawn to a non-elected invention.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 58-60 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-3, 5, 6, 12-13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abileah et al (Abileah) USPAT 5,629,784 in view of Silverstein et al (Silverstein) USPAT 5,442,467, and further in view of Jannson et al (Jannson) USPAT 5,365,354.

As to claims 1-3, 5, 6, 12-13 and 15, Abileah discloses in Figure 1 (a), a display comprising: a transmissive LCD display screen, 3-15,;
a transparent glass panel, 35, (col. 8, lines 10-15) having a backside and an anti-reflective (Applicant's anti-glare) front surface (col. 14, lines 15-32) configured to diffuse ambient light, which results in reduced glare (multiple examples taught); and
a diffuser, 21 (Applicant's bulk diffuser), (col. 11, lines 54-62) disposed between the transmissive display screen and the backside, and the bulk diffuser is configured to diffuse image light originating from a backlight, 2, of the display.

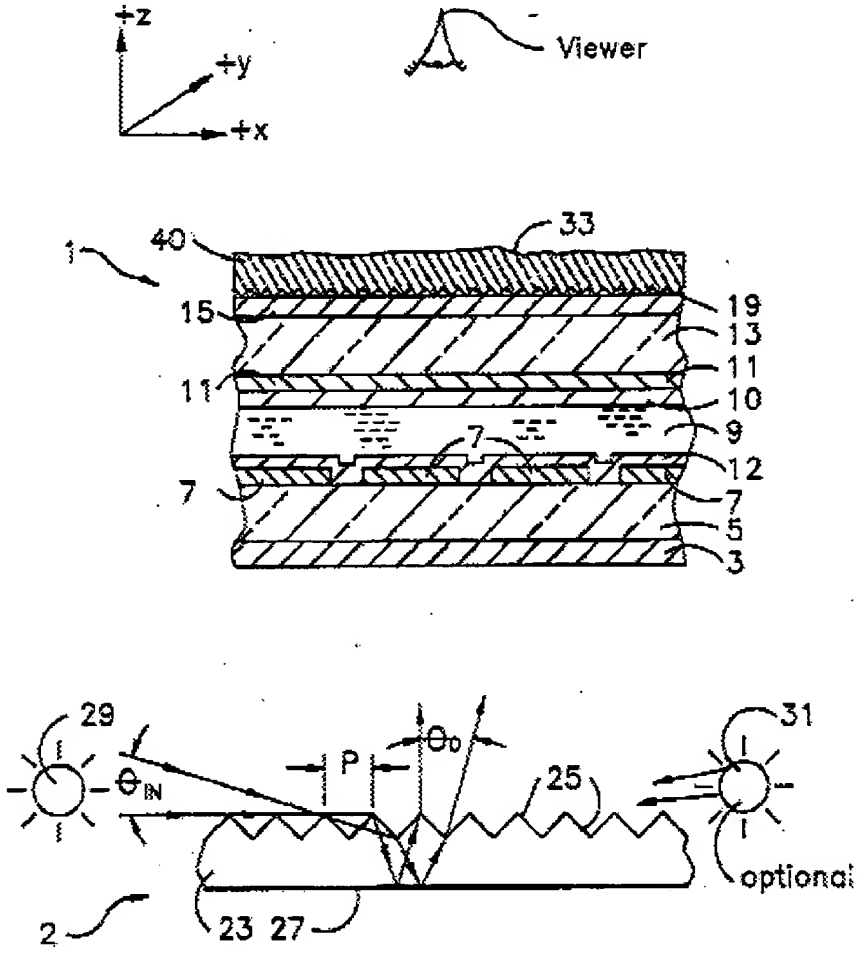

Fig. 1(b)

Abileah does not explicitly disclose 1) a bulk diffuser bonded to the transmissive display screen and the transparent panel.

Abileah does not explicitly disclose 2) a bulk diffuser comprising a diffusive material configured to scatter light within the diffusive material.

Silverstein teaches 1) the use of index of refraction matched (Applicant's index-matched) adhesives to completely bond (Applicant's bubble-free) diffusers to neighboring structures to reduce unwanted reflections and improve display contrast and color performance (col. 9, line 51 through col. 10, line 22).

Silverstein is evidence that ordinary workers in the art of liquid crystals would find the reason, suggestion, or motivation to add index of refraction matched adhesives to bond diffusers to both neighboring structures to reduce unwanted reflections and improve display contrast and color performance.

Therefore, it would have been obvious to one having ordinary skill in the art of liquid crystals at the time the invention was made to modify the LCD of Abileah with the index of refraction matched adhesives to bond diffusers to both neighboring structures of Silverstein to reduce unwanted reflections and improve display contrast and color performance.

Jannson teaches 2) a superior holographic diffuser that is a volume type holographic bulk diffuser comprising a diffusive material configured to scatter light within the diffusive material [Abstract] that is "structureless" [smooth top and bottom surface of the diffuser] to achieve improved transmission efficiency, uniform brightness, and no visual glare for better display performance [col. 2, lines 43-55].

Jannson is evidence that ordinary workers in the art of liquid crystals would find the reason, suggestion, or motivation to add a volume type holographic bulk diffuser comprising a diffusive material configured to scatter light within the diffusive material that is smooth on the top and bottom surfaces to achieve improved transmission efficiency, uniform brightness, and no visual glare for better display performance.

Therefore, it would have been obvious to one having ordinary skill in the art of liquid crystals at the time the invention was made to modify the display system of Abileah in view of Silverstein with a volume type holographic bulk diffuser comprising a

diffusive material configured to scatter light within the diffusive material that is smooth on the top and bottom surfaces of Jannson to achieve improved transmission efficiency, uniform brightness, and no visual glare for better display performance.

As to claim 10, Abileah in view of Silverstein and Jannson as combined above disclose the structure as claimed which would result in a bulk diffuser configured to reduce undesirable optical effects caused by the surface texture per Applicant's enabling disclosure. This is not improper hindsight. Applied prior art teaches all that Applicant has disclosed in the instant Specification regarding this limitation.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Abileah in view of Silverstein and Jannson, as applied above, in view of Varaprasad et al (Varaprasad) USPAT 6,087,012.

As to claim 7, Abileah in view of Silverstein and Jannson disclose the system of claim 6.

Abileah in view of Silverstein and Jannson does not explicitly disclose a chemically etched surface.

Varaprasad discloses in the Background of the Invention that chemical etching of the outer surface of a glass substrate is one way of forming an anti-glare surface known in the prior art (col. 1, lines 28-52).

Varaprasad is evidence that ordinary workers in the art of liquid crystals would find the reason, suggestion, or motivation to use a chemically etched glass transparent panel as having art recognized suitability for the intended purpose of achieving desired anti-glare performance (MPEP 2144.07).

Therefore, it would have been obvious to one having ordinary skill in the art of liquid crystals at the time the invention was made to modify the LCD of Abileah in view of Silverstein and Jannson with the chemically etched glass transparent panel of the prior art cited by Varaprasad to achieve desired anti-glare performance.

Claims 1-3, 5, 6, 12-14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abileah et al (Abileah) USPAT 5,629,784 in view of Sanelle et al (Sanelle) USPAT 5,442,467 and further in view of Jannson.

As to claims 1-3, 5, 6, 12-14 and 15, Abileah discloses in Figure 1 (a), a display comprising: a transmissive LCD display screen, 3-15,;
a transparent glass panel, 35, (col. 8, lines 10-15) having a backside and an anti-reflective (Applicant's anti-glare) front surface (col. 14, lines 15-32) configured to diffuse ambient light, which results in reduced glare (multiple examples taught); and

a diffuser, 21 (Applicant's bulk diffuser), (col. 11, lines 54-62) disposed between the transmissive display screen and the backside, and the bulk diffuser is configured to diffuse image light originating from a backlight, 2, of the display.

Abileah does not explicitly 1) disclose a bulk diffuser bonded to the transmissive display screen and the transparent panel.

Abileah does not explicitly disclose 2) a bulk diffuser comprising a diffusive material configured to scatter light within the diffusive material.

Sanelle teaches 1) the use of an index-matched bond material (col 5, line 56 through col. 6, line 2) wherein the index-matched bond material has no air gaps (Applicant's substantially bubble-free) (col. 6, lines 1-2), and wherein the index-matched bond material comprises an epoxy (col. 5, lines 66 and 67) to eliminate unwanted refractions and thereby improve display performance.

Sanelle is evidence that ordinary workers in the art of liquid crystals would find the reason, suggestion, or motivation to add an index-matched bond material on both sides of the bulk diffuser wherein the index-matched bond material is bubble-free, and wherein the index-matched bond material comprises an epoxy, to eliminate unwanted refractions and thereby improve display performance.

Therefore, it would have been obvious to one having ordinary skill in the art of liquid crystals at the time the invention was made to modify the LCD of Abileah with the index-matched bond material on both sides of the bulk diffuser wherein the index-matched bond material is bubble-free, and wherein the index-matched bond material

comprises an epoxy of Sanelle, to eliminate unwanted refractions and thereby improve display performance.

Jannson teaches 2) a superior holographic diffuser that is a volume type holographic bulk diffuser comprising a diffusive material configured to scatter light within the diffusive material [Abstract] that is "structureless" [smooth top and bottom surface of the diffuser] to achieve improved transmission efficiency, uniform brightness, and no visual glare for better display performance [col. 2, lines 43-55].

Jannson is evidence that ordinary workers in the art of liquid crystals would find the reason, suggestion, or motivation to add a volume type holographic bulk diffuser comprising a diffusive material configured to scatter light within the diffusive material that is smooth on the top and bottom surfaces to achieve improved transmission efficiency, uniform brightness, and no visual glare for better display performance.

Therefore, it would have been obvious to one having ordinary skill in the art of liquid crystals at the time the invention was made to modify the display system of Abileah in view of Sanelle with a volume type holographic bulk diffuser comprising a diffusive material configured to scatter light within the diffusive material that is smooth on the top and bottom surfaces of Jannson to achieve improved transmission efficiency, uniform brightness, and no visual glare for better display performance.

As to claim 10, Abileah in view of Sanelle and Jannson, as combined above, disclose the structure as claimed which would result in a bulk diffuser configured to

reduce undesirable optical effects caused by the surface texture per Applicant's enabling disclosure. This is not improper hindsight. Applied prior art teaches all that Applicant has disclosed in the instant Specification regarding this limitation.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Abileah in view of Sanelle and Jannson in view of Varaprasad et al (Varaprasad) USPAT 6,087,012.

As to claim 7, Abileah in view of Sanelle and Jannson, as combined above, disclose the system of claim 6.

Abileah in view of Sanelle and Jannson does not explicitly disclose a chemically etched surface.

Varaprasad discloses in the Background of the Invention that chemical etching of the outer surface of a glass substrate is one way of forming an anti-glare surface known in the prior art (col. 1, lines 28-52).

Varaprasad is evidence that ordinary workers in the art of liquid crystals would find the reason, suggestion, or motivation to use a chemically etched glass transparent panel as having art recognized suitability for the intended purpose of achieving desired anti-glare performance (MPEP 2144.07).

Therefore, it would have been obvious to one having ordinary skill in the art of liquid crystals at the time the invention was made to modify the LCD of Abileah in view

of Sanelle and Jannson with the chemically etched glass transparent panel of the prior art cited by Varaprasad to achieve desired anti-glare performance.

Response to Arguments

Applicant's arguments with respect to claims 1-3, 5-7, 10, and 12-15 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy L Rude whose telephone number is (571) 272-2301. The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font can be reached on (571) 272-2415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Timothy L Rude
Examiner
Art Unit 2883

tlr

Frank G. Font
Supervisory Patent Examiner
Technology Center 2800